Gerakoulis 113351

IN THE CLAIMS:

1 - 31 (Cancelled).

32. (Currently Amended) A method <u>communication between a first terminal, A, and a base station, BS1, that is coupled to a packet network</u> ~~for code division switching at an originating terminal~~, comprising the steps:

<u>when A has payload information for a party B, A sending to BS1 an access request message comprising preamble field and a header field that identifies A, the message spread with a single orthogonal code g_1, which is allocated to BS1 to distinguish transmissions to BS1 from transmissions to neighboring base stations;</u>

<u>if, in response to the step of sending, A receives and acknowledgment message, said acknowledgment message containing timing information and information about ω_A, which is an orthogonal code assigned by BS1 to A and which at the time of the assigning is assigned to no other party, sending a payload message to BS1 that contains the payload information, in a format where at least most of the payload information is conditioned for its direct submission to the packet network, spread with g_1 and with ω_A</u>

~~spreading a transmission signal by a PN code assigned to an intended receiving port;~~

~~inserting an identifier of a few bits for identifying a user;~~

~~spreading payload data by an orthogonal code;~~

~~spreading the orthogonal spread payload data signal by the PN code; and~~

~~forwarding said PN-code spread transmission signal and said twice spread payload data signal to an access radio port.~~

33. (Currently Amended) The method according to claim 32, wherein <u>at least one of g_1 and ω_A is a PN-code</u> ~~said wireless network is a CDMA network~~.

34. (Currently Amended) The method according to claim 32, wherein ω_A ~~said orthogonal code~~ is a Walsh code.

35. (Currently Amended) The method according to claim 32, wherein the payload <u>information</u> comprises ~~ATM~~ packets <u>that contain a destination address</u> ~~spreading~~

2

Gerakoulis 113351

~~the transmission signal by the PN-code further comprises forming a preamble which is~~
~~prepended to a packet.~~

36 - 56. (Canceled) .

57. (New) The method of claim 32 where said step of sending the access request message is performed using a Spread Spectrum Random Access (SSRA) protocol.

58. (New) The method of claim 32 where A marks time when A sends the access request message, and employs the marked time and the timing information contained in the acknowledgement message to perform the step of sending the payload synchronously.

59. (New) The method of claim 35 where the packets are ATM cells.

60. (New) The method of claim 35 further comprising the steps, executed in BS1, of
receiving the payload message;
despreading the payload message with g_i and ω_A to recover said packets contained in the payload message; and
applying the recovered packet to the packet network.

61. (New) The method of claim 35 where the payload information includes a terminating flag.

62. (New) The method of claim 61 further comprising the steps, executed in BS1, of:
receiving the payload message;
despreading the payload message with g_i and ω_A to recover said packets contained in the payload message and said terminating flag;
applying the recovered packet to the packet network; and
releasing the assignment of ω_A to A.

3

Gerakoulis 113351

63. (New) The method according to claim 32, where BS1 is part of a terrestrial CDMA wireless network.

64. (New) The method of claim 32 where, if A fails to receive an acknowledgement message within a predetermined time interval, A re-sends the access request message.

65. (New) The method of claim 35 further comprising the steps, executed in BS1, of:

when BS1 has a plurality of packets that are destined to A which are received from an access node through which BS1 is coupled to the network, sending a paging message to A, spread with orthogonal code g_1 and orthogonal code ω_A;

receiving an acknowledgement message from A; and

following receipt of the acknowledgement message, B

sending a payload message, spread with orthogonal code g_1 and orthogonal code ω_A, which contains said plurality of packets.

66. (New) The method of claim 35 further comprising the steps, executed in BS1, of:

when BS1 has a plurality of packets that are destined to A which are received from an access node through which BS1 is coupled to the network, sending a paging message to A, spread with orthogonal code g_1 and orthogonal code ω_A;

receiving an acknowledgement message from A; and

following receipt of the acknowledgement message, B

sending a payload message, spread with orthogonal code g_1 and orthogonal code ω_A, where the payload message contains said plurality of packets and an end of transmission field.

67. (New) A method executed in a base station of a terrestrial wireless network that is wire-connected to an access node of a packet network, comprising the steps of:

receiving from the access node packets that are destined to a party, A, that is known to be accessible by BS1;

4

Gerakoulis 113351

     sending a paging message to A, spread with orthogonal code g1, which distinguishes transmissions by BS1 from transmissions by other base stations of said wireless network, where the paging message includes information about orthogonal code ω_A that is assigned by BS1 to A;

     receiving an acknowledgement message from A in response to said paging message; and

     following receipt of the acknowledgment message, sending a payload message, spread with orthogonal code g_1 and with orthogonal code ω_A.

5